

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/019122

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ G03H1/02, G03F7/004

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ G03H1/02, G03F7/004

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2005
 Kokai Jitsuyo Shinan Koho 1971-2005 Jitsuyo Shinan Toroku Koho 1996-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2000-47552 A (Toppan Printing Co., Ltd.), 18 February, 2000 (18.02.00), Full text; all drawings (Family: none)	1-8

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
28 March, 2005 (28.03.05)

Date of mailing of the international search report
12 April, 2005 (12.04.05)

Name and mailing address of the ISA/
Japanese Patent Office

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The claimed invention is questionable in the following points.

(1) Claim 1 specifies that the maximum absorption wavelength of the sensitizing dye is deviated by 14 nm or more from a volume hologram recording wavelength established within the visible region. However, as described in, for example, Par. No. [0041] of JP 2002-328468 A (Fuji Photo Film Co., Ltd.), it is of common practice to match the maximum absorption wavelength of the sensitizing dye to the recording wavelength as perfectly as possible, and this is comprehensible from the viewpoint of the technical significance of sensitizing dye. While this invention is contradictory to the above common concept, the detailed description of the invention fails to provide satisfactory technical explanation for dealing with the contradiction. In particular, the upper limit of the degree of deviation is not specified, and it cannot be believed that even if there is a great deviation between the maximum absorption wavelength of the sensitizing dye and the recording wavelength, the activity of the sensitizing dye is exerted. Further, even when the degree of deviation is about 14 nm representing the lower limit, it cannot be believed at all that the expected effect is exerted irrespective of selection of any species of photopolymerization initiator and sensitizing dye as long as the requirement defined in the claim is satisfied (for example, in claim 1, the photopolymerization initiator and sensitizing dye are scarcely defined). Consequently, this invention is only supported by particular combinations of photopolymerizable compound, photopolymerization initiator, sensitizing dye and recording wavelength described in the Examples and cannot be stated as being expansible to the whole scope claimed.

(2) In claim 1, the photosensitive composition for volume hologram recording is defined as exhibiting absorption at recording wavelength. However, the technical significance of this definition is unclear.

Therefore, the claimed invention is not disclosed within the meaning of PCT Article 5 and supported within the meaning of PCT Article 6.

Therefore, the scope of search has been limited to the contents of the Examples.